

#### Cycle view of the study programme

B1 Or Th Pr Au Cr

Depending on your educational background or depending on the focus, it is possible that the prerequisites / corequisites for the 1st year of the programme are presented in the block 2. You are therefore invited to read through the list of courses in block 2 even if you are registering for the first time in this master.

#### Compulsory courses (B1 : 60Cr, B2 : 30Cr)

ARCH2007-2	<i>Environmental design of buildings in the context of sustainable development</i> - AnneFrançoise MARIQUE, Sigrid REITER - Suppl : Sylvain MARBEHANT - [2d FW, 40h Proj.] <b>Corequisite :</b> ARCH0115-1 - Ateliers d'architecture IV	B1	Q1	15	30	[+]	<b>4</b>
ARCH0115-1	<i>Architectural studio IV, integrated conception</i> - Catherine ELSEN - [1d FW, 88h Proj.] <b>Corequisite :</b> ARCH0075-3 - Studio Digital Collaboratif BIM ARCH2007-2 - Conception architecturale et urbaine durable	B1	Q1	20	130	[+]	<b>10</b>
GCIV0201-2	<i>Concretes and new Materials Technologies</i> - Luc COURARD - [0,5d FW, 6h Labo., 8h Proj.]	B1	Q1	32	20	[+]	<b>5</b>
ARCH0027-2	<i>Conservation and Restoration of Cultural Built Heritage</i> - Pierre PAQUET - [1d FW]	B1	Q1	30	-	[+]	<b>3</b>
ARCH3271-1	<i>Introduction to scientific research</i> - Mario COOLS - [30h Proj.]	B1	Q2	10	10	[+]	<b>2</b>
PHIL0076-1	<i>Aesthetics and contemporary art</i> - Maud HAGELSTEIN	B1	Q2	30	-	-	<b>3</b>
ARCH3283-1	<i>Acoustics and lighting of buildings</i> - <i>Introduction</i> - Arnaud THIENPONT - <i>Methods and applications</i> - Arnaud THIENPONT - [16h Proj.]	B1	Q1	15	14	-	<b>5</b>
				15	10	[+]	
ARCH0080-1	<i>Building physics and air conditioning</i> - Philippe ANDRE	B1	Q2	30	30	-	<b>5</b>
ARCH2011-1	<i>Sustainable building construction techniques IV : Building renovation</i> - Suppl : Guirec RUELLAN - [2d FW] <b>Corequisite :</b> ARCH0027-2 - Conservation et restauration du patrimoine culturel immobilier	B1	Q2	15	15	[+]	<b>4</b>
GCIV2063-1	<i>Planning buildings, co-ordination and safety on building sites</i> - Fabian BOUCHER - [1d FW]	B1	Q1	15	15	[+]	<b>2</b>
ARCH2003-1	<i>Urbanisation dynamics</i> - Jacques TELLER - [65h Proj.]	B1	Q2	26	26	[+]	<b>5</b>
ARCH0075-3	<i>Studio Digital Collaboratif BIM</i> - Aurélie DE BOISSIEU, Pierre LECLERCQ - [1d FW, 78h Proj.] <b>Corequisite :</b> ARCH0115-1 - Ateliers d'architecture IV	B1	Q2	15	45	[+]	<b>6</b>
ASTG9002-1	<i>Professional internship</i> - Shady ATTIA - [20d FW, 20h Proj.]	B1	TA	-	-	[+]	<b>3</b>
ARCH3336-1	<i>Setting up real-estate operations</i> - Mathurin SMOOS	B1	Q2	32	-	-	<b>3</b>
ARCH0116-3	<i>Architectural studio V: integrated project</i> - Jacques TELLER - [1d FW, 150h Proj.] <b>Corequisite :</b> ARCH0115-1 - Ateliers d'architecture IV	B2	Q2	-	100	[+]	<b>10</b>
ATFE0009-1	<i>Master thesis / project</i> - COLLÉGIALITÉ, Mario COOLS - [600h Proj.]	B2	TA	-	-	[+]	<b>20</b>

*Notice* : Cycle of conferences on the professional competences of the engineer/architect (code of ethics, organising real estate operations, public procurement, etc.): compulsory attendance (Block 1)

*Notice* : Study trip: guided tours on architectural and urbanistic achievements (optional)

*Notice* : Cycle of conferences on the professional competences of the engineer/architect (code of ethics, organising real estate operations, public procurement, etc.): compulsory attendance (Block 2)

#### Optional courses (B2 : 30Cr)

Choose one focus from the following : (B2 : 30Cr)

##### Professional focus in architectural and urban engineering (B2 : 30Cr)

ARCH0065-2	<i>Design Process Analysis</i> - Samia BEN RAJEB, Pierre LECLERCQ - [18h Proj.]	B2	Q2	15	30	[+]	3
GCIV0165-1	<i>Timber constructions</i> (english language) - JeanMarc FRANSEN	B2	Q1	15	15	-	3
ARCH3282-1	<i>Urban Transport &amp; Mobility</i> (english language) - Mario COOLS - [30h Proj., 2d FW]	B2	Q1	25	25	[+]	5
ARCH2019-1	<i>Engineering of urban environments</i> - Sigrid REITER - [60h Proj.] <b>Corequisite :</b> ARCH2007-2 - Conception architecturale et urbaine durable	B2	Q1	18	36	[+]	5
ARCH2018-1	<i>Urban and territorial governance</i> - Christophe BREUER, Jacques TELLER	B2	Q1	20	-	-	2
ARCH3337-1	<i>Computational design</i> - Aurélie DE BOISSIEU - [1d FW]	B2	Q2	15	42	[+]	2
SPOL2209-3	<i>Environmental and land policies</i> - Sophie HANSON	B2	Q1	30	-	-	2
ARCH3272-1	<i>Building performance simulation and monitoring</i> (english language) - Part 1 - Shady ATTIA - Part 2 - Shady ATTIA - [70h Proj.]	B2	Q1	15	15	-	5
	<b>Prerequisite :</b> ARCH0080-1 - Physique du bâtiment et climatisation			15	25	[+]	
GCIV0133-9	<i>Maintenance, repair and reinforcement of constructions</i> (english language) - Luc COURARD - [1d FW] <b>Prerequisite :</b> GCIV0201-2 - Technologie des bétons et matériaux nouveaux	B2	Q1	20	20	[+]	3

A visit to a business (optional).

Annual study trip : guided tours on architectural and urbanistic achievements (optional).

Final year trip: at the beginning of the academic year, prior to course organisation, guided tours of architectural and urbanistic achievements (optional).

Cycle of conferences on the professional competences of the engineer/architect (code of ethics, organising real estate operations, public procurement, etc.): compulsory attendance.

##### Professional focus in "urban and environmental engineering" (B2 : 30Cr)

UEEN0001-1	<i>Water and energy in urban environment</i> (english language) - Pierre DEWALLEF, Benjamin DEWALS - [2d FW]	B2	Q1	26	26	[+]	5
UEEN0002-1	<i>Land rehabilitation in urban environments</i> (english language) - Serge BROUYÈRE, Frédéric COLLIN - [10h Labo., 20h Proj., 2d FW]	B2	Q1	20	10	[+]	5
UEEN0003-1	<i>Urban resilience</i> (english language) - Manal GINZARLY, Jacques TELLER - [60h Proj., 1d FW]	B2	Q1	36	16	[+]	5
UEEN0004-1	<i>Urban planning and transportation</i> (english language) - Mario COOLS, Jacques TELLER - [1d FW]	B2	Q1	26	26	[+]	5
UEEN0005-1	<i>Participatory Design at an Urban Scale</i> (english language) - Catherine ELSEN, Clémentine SCHELINGS - [20h Proj., 1d FW]	B2	Q1	20	10	[+]	2
UEEN0006-1	<i>UEE Integrated Project</i> (english language) - Luc COURARD - [100h Proj., 1d FW]	B2	Q1	-	90	[+]	5
GEOG2053-1	<i>Introduction to Urban GIS</i> (english language) - Roland BILLEN	B2	Q1	12	20	-	3

Notice : with the agreement of the President of the jury, students can also choose a course from catalogue UNIC.

#### Optional courses

A visit to a business (optional).

Final year trip: at the beginning of the academic year, prior to the organisation of the courses, guided tours to companies, geological sites (optional).

#### Additional courses for Erasmus students (B2 : 14Cr)

LANG0840-1	<i>French, S1 - 1er quadrimestre</i> - ISLV, Marielle MARÉCHAL	B2	Q1	-	-	-	5
LANG0840-2	<i>French, S2 - 2e quadrimestre</i> - ISLV, Marielle MARÉCHAL	B2	Q2	-	-	-	5
GCIV0008-2	<i>Energy and transport (english language)</i> - Mario COOLS - [25h Proj.]	B2	Q1	30	15	[+]	4

**Additional credits, Master of Science (MSc) in Architectural Engineering (aimed at Bachelors and qualified engineers - in particular students from the "Institut Mines Telecom d'Alès", from the "Ecole d'Ingénieurs de La Rochelle, de Polytech Lille", from the "Institut de Technologie du Cambodge" and from the "EPF Troyes, Sceaux, Montpellier").**

#### Compulsory courses (B0 : 60Cr)

*Notice* : this programme is likely to be adjusted according to skills previously acquired by the student.

ARCH0002-1	<i>Methodology of Architectural Projects I : functional and ergonomical composition</i> - Pierre LECLERCQ - [1d FW, 100h Proj.]	B0	TA	30	60	[+]	8
ARCH3270-1	<i>Architectural studio IA: Graphic composition</i> - Catherine ELSEN - [1d FW, 35h Proj.]	B0	Q1	10	40	[+]	3
ARCH0066-2	<i>Architectural studio IB: architectural composition</i> - Catherine ELSEN - [1d FW, 25h Proj.]	B0	Q2	10	40	[+]	4
ARCH0006-2	<i>Methodology of Architectural Projects II : bioclimatic composition</i> - Pierre LECLERCQ - [1d FW, 85h Proj.]	B0	TA	40	50	[+]	8
ARCH0068-7	<i>Urban planning and site analysis, Theory</i> - Jacques TELLER	B0	Q1	15	20	-	2
ARCH0017-4	<i>Digital architectural modeling</i> - Aurélie DE BOISSIEU - [98h Proj.]	B0	Q2	20	70	[+]	6
ARCH2224-1	<i>Architectural culture 2 - history of construction - Antiquity to the 19th century</i> - Baptiste DRUGMAND, Philippe SOSNOWSKA	B0	Q2	40	-	-	4
ARCH3260-2	<i>Architectural studio II, Introduction</i> - Catherine ELSEN - [1d FW, 85h Proj.]	B0	TA	20	70	[+]	7
ARCH3262-1	<i>Architectural studio III A</i> - Shady ATTIA - [1d FW, 55h Proj.]	B0	Q1	10	35	[+]	5
ARCH3263-1	<i>Architectural studio III B</i> - Sigrid REITER - Suppl : Sylvain MARBEHANT - [1d FW, 55h Proj.]	B0	Q2	10	35	[+]	4
GCIV2030-2	<i>Structural Design of Buildings</i> - JeanMarc FRANSSSEN - [40h Proj.]	B0	Q2	15	30	[+]	4
ARCH3281-1	<i>Summary of construction practices in the building industry</i> - [1d FW, 30h Proj.]	B0	Q1	7	45	[+]	5

**Additional ECTS Master of science in architecture and engineering (aimed at bachelors in architecture)**

#### Compulsory courses (B0 : 60Cr)

*Notice* : this programme is likely to be adjusted according to skills previously acquired by the student.

MATH0002-5	<i>Mathematical analysis I</i>	B0	Q1				8
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	- Part 1 - Eric DELHEZ		22	22	-	
	- Part 2 - Patricia TOSSINGS - [26h QA Sess.]		-	-	[+]	
MATH0066-1	<i>Complement of mathematics 2</i> - Patricia TOSSINGS	B0 Q2	26	26	-	<b>4</b>
ARCH0006-2	<i>Methodology of Architectural Projects II : bioclimatic composition</i> - Pierre LECLERCQ - [1d FW, 85h Proj.]	B0 TA	40	50	[+]	<b>8</b>
MECA0001-2	<i>Mechanics of materials</i> - JeanFrançois DEMONCEAU, Laurent DUCHENE - [2h Labo., 12h Proj.]	B0 Q1	27	25	[+]	<b>5</b>
MECA0012-6	<i>Solid mechanics</i> - Laurent DUCHENE - [15h Proj.]	B0 Q2	26	26	[+]	<b>5</b>
GCIV0184-5	<i>Building Materials</i> - Luc COURARD, Anne HABRAKEN - [0,5d FW, 12h Labo., 12h Proj.]	B0 Q2	36	16	[+]	<b>5</b>
GCIV2172-1	<i>Metallic Elements Calculation</i> - JeanFrançois DEMONCEAU - [1d FW, 10h Proj.]	B0 Q2	26	26	[+]	<b>5</b>
GCIV2173-1	<i>Reinforced concrete (english language)</i> - Boyan MIHAYLOV - [1d FW, 10h Proj.]	B0 Q2	26	26	[+]	<b>5</b>
ARCH0009-3	<i>Sustainable building construction techniques III: networks</i> - Shady ATTIA - [1d FW, 45h Proj.]	B0 Q1	17	35	[+]	<b>5</b>
ARCH3281-1	<i>Summary of construction practices in the building industry</i> - [1d FW, 30h Proj.]	B0 Q1	7	45	[+]	<b>5</b>
GCIV0608-1	<i>Introduction to Structures engineering</i> - JeanFrançois DEMONCEAU, Vincent DENOËL, JeanMarc FRANSSSEN - [4d FW, 40h Proj.]	B0 Q1	12	12	[+]	<b>5</b>